Preface

Prof. Dr. B. CSÁKÁNY, The Rector of the University J. A. has agreed with the establishment of the Cell Biological and Evolutionary Micropaleontological Laboratory in the Department of Botany in his official communication of 25B—1990 Sz. O. dated on 21th August 1990. The basic purpose of this laboratory is the contribution to multidisciplinary research programs with the collaboration of several researchers or students from foreign countries or institutions. Previously a remarkable number of research programs were completed and their results were published. This place lets me mention the names of colleagues and students as scientific collaborators during the last five years: N. ABOUL ELA (Department of Geology, Cairo University, Cairo, Egypt), E. AMBRUS (Student, Department of Biology, Gyula Juhász High School, Szeged, Hungary), J. CIVIS (Departamento de Paleontologia, Facultad de Ciencias, Universidad de Salamanca, Salamanca, Spain), E. FEJES (Student, Department of Biology, Gyula Juhász High School. Szeged, Hungary) W. M. FELDER (Rijks Geologische Dienst Karteerdistrict Zuid, Kantoor Heerlen, AJ Heerlen, The Netherlands), G. GÉVAY (Educational Technology Center, J. A. University, Szeged, Hungary), B. GYEBROVSZKI (Student, Department of Biology, Gyula Juhász High School, Szeged, Hungary), G. F. W. HERNGREEN (Geological Survey of The Netherlands, AD Haarlem, The Netherlands), M. HETÉNYI (Department of Mineralogy, Geochemistry and Petrology, J. A. University, Szeged, Hungary), I. KINCSEK (Department of Biology, Gyula Juhász High School, Szeged, Hungary), L. KÖRMÖCZI (Department of Botany, J. A. University, Szeged, Hungary), J. P. M. T. MEESSEN (Geologisch Bureau, Geological Survey of The Netherlands, AC Heerlen, The Netherlands), E. NAGY (Hungarian Geological Institute, Budapest, Hungary), I. ROJIK (Faculty of Sciences, Laboratory of Electron-microscopy, Szeged, Hungary), J. DE PORTA (Departamento de Paleontologia, Facultad de Geologia, Universidad de Barcelona, Barcelona, Spain), N. SOLÉ DE PORTA (Departamento de Paleontologia, Facultad de Geologia, Universidad de Barcelona, Barcelona, Spain), T. SZEDERKÉNYI (Department of Mineralogy, Geochemistry and Petrology, J. A. University, Szeged, Hungary), J. WINTER (E. M. A. University, Department of Geology, Greifswald, Germany). The purpose, the subjects and the methods of these investigations are heterogeneous, these may be classified in several fields of science. E. g.: Botany, Geology, Geochemistry, Biostratigraphy, Cell Biology, Molecular structure, etc. (This multidisciplinary character is the basis in getting new results by the way of combination of the methods and concepts of different independent laboratories.)

Regarding the teaching program of our laboratory, two different fields may be pointed out:

1. Undergraduate and postgraduate teaching for Hungarian and foreign students and young colleagues. Special lectures from the subjects as follows:
— Basic Palynology, Micropaleontology.
— Biopolymer organization and structural levels of the plant cell wall.
— Quasi-crystalloid modelling of the biopolymer structure of the plant cell wall.
— Different problems of the general Evolution Theory, such as the Supernova Theory and so on.

2. As an attempt, a search for young talented persons for scientific laboratory work was started about three years ago. The best voluntary grammar-school students had the opportunity to work in our laboratory. Thanks for the help in the organization and cooperation of J. BÁNFALVY, M. BOGÁTHY-EKE, and M. JURAY. Several young (teen-ager) scholars learned the elementary disciplines of laboratory work and scientific search. The best grammar-school students are co-authors of several publications on the understanding their activity in the elaboration of the details of researches. Some of the above mentioned papers are under publication. Co-authors as former grammar-school students are as follows: P. AILER, A. BELLON, E. FARKAS, Á. SCHMÉL and A. TÓTH.

E. FARKAS started to work in our laboratory three years ago and now as a university student she continues her work at the same place. It is hoped, that the best of these young students are going to become well-known scientists in the future.

This started as an attempt and now it may be declared this is succesful and also will continue in the future. As regards the education of the youngest students the help of the laboratory assistant I. BIRÓ—HALÁSZ is also emphasize. This series of publication will assure place for the youngest students, too.

Szeged, 7. January, 1991.

M. KEDVES
head of the laboratory

Appendix

List of publications which appeared in cooperation in the last five years

ABOUL ELA, N. M. and KEDVES, M. (1988): Palynological studies on intercalated sediments of the Yemen volcanics near Sana'a. — Ann. Univ. Sci. Budapestinensis de R.E. nom., Sect. Geol. *28,* 27—41.

GÉVAY, G. and KEDVES, M. (1989): A structural model of the sporopollenin based on dodecahedrane units. — Acta Biol. Szeged *35,* 53—57.

HERNGREEN, G. F. W., FELDER, W. M. KEDVES, M. and MEESSEN, J. P. M. T. (1986): Micropaleontology of the Maestrichtian in borehole Bunde, The Netherlands. — Rev. Palaeobot. Palynol. *48,* 1—70.

HETÉNYI, M. and KEDVES, M. (1986): Organic Geochemical characterization of brown coals by thermal degradation and modified Rock—Eval method. — Acta Miner.—Petr. Szeged *28,* 95—108.

HETÉNYI, M. and KEDVES, M. (1990): Relations between the hydrocarbon genetic features of kerogens and their biological precursor material. — Int. Symp. on Geochem. Prosp., Extended Abstracts, 246.

KEDVES, M. and KINCSEK, I. (1989a): Quasi-crystalloid biopolymer organization of the fossil spore and pollen wall. — II. European Palaeobot. Conf., Madrid, Abstracts, 16.

KEDVES, M. and KINCSEK, I. (1989b): Effect of the high temperature on the morphological characteristic features of the sporomorphs I. — Acta Biol. Szeged *35,* 233—235.

KEDVES, M. J., KINCSEK I., AMBRUS, E. FEJES, A. y GYEBROVSZKI, B. (1988): La estructura molecular de la exina en algunos granos de polen bialados de gimnospermas. — VII Simposio de Palinologia, A. P. L. E., Granada, Abstracts, 67.

KEDVES, M. et KÖRMÖCZI, L. (1985): Sur les problèmes de conservation des sporomorphes dans des conditions differentes. — An. Asoc. Palinol. Leng. Esp. *2,* 263—271.

KEDVES, M. and ROJIK, I. (1989): Investigation of the biopolymer organization of partially degraded exines with the fragmentation method. — Acta Biol. Szeged *35,* 71—80.

KEDVES, M. SOLE DE PORTA, N., PORTA DE, J. y CIVIS, J. (1985): Estudio palinologico de los sedimentos Maastrichtienses del Barranco del La Posa (Prepirineo, Lerida, España). — An. Asoc. Palinol. Leng. Esp. *2,* 247—253.

KEDVES, M. and SZEDERKÉNYI, T. (1985): The importance of the spore-pollen investigations in the recognition of the radioactive element content of the lake mud. — Acta Biol. Szeged *31,* 215—216.

KEDVES, M. and SZEDERKÉNYI, T. (1986): Investigation on the microscopic plant remnants and the radioactive element contents of some mud samples of the Hungarian Plain. — Acta Biol. Szeged *32,* 209—211.

KEDVES, M. and SZEDERKÉNYI, T. (1988): Transmission electron microscopical investigation of xylem remains transporting radioactive elements in the mud of Lake Vadkert. — Acta Biol. Szeged *34,* 71—81.

KEDVES, M. and WINTER, J. (1988): Higher organized sporoderm biopolymer units of *Equisetum arvense L.* — Acta Bot. Hung. *34,* 361—374.

NAGY, E. and KEDVES M. (1988): State of Palynological research in Hungary. — Acta Bot. Hung. *34,* 311—324.

PORTA, DE J. KEDVES M., SOLÉ DE PORTA, N. and CIVIS, J. (1985): Palinologia del Maastrichtiense del Barranco de la Posa (Lérida, España). Problemática regional. — Rev. Inv. Geol. *40,* 5—28.